Atti Soc. ital. Sci. nat. Museo civ. Stor. nat. Milano, 128 (3-4): 235-239, 15-XII-1987

Luca Magnaghi (*) & Michela Podestà (*)

AN ACCIDENTAL CATCH OF 8 STRIPED DOLPHINS, *STENELLA COERULEOALBA* (MEYEN, 1833), IN THE LIGURIAN SEA

(*Cetacea Delphinidae*)

Abstract. — The authors describe the accidental catch of eight Striped dolphins, *Stenella coeruleoalba*, in the Ligurian Sea. They were on board a tuna boat and they report the behavior of the trapped animals. Five specimens did not survive, while three were released still alive.

Key words: *Stenella coeruleoalba*, catch, Ligurian Sea.

Riassunto. — *Su di una cattura accidentale di 8 Stenelle striate*, Stenella coeruleoalba (*Meyen, 1833*), *nel Mar Ligure* (Cetacea Delphinidae).

Gli autori riportano la loro diretta testimonianza riguardante la cattura accidentale di otto Stenelle striate, *Stenella coeruleoalba*, avvenuta il 6 settembre 1986 nel Mar Ligure. Gli animali sono rimasti intrappolati in una rete da circuizione, usata dalle « tonnare volanti » per la pesca dei tonni. E' descritto il comportamento degli individui durante le fasi di recupero della rete. Solo tre individui sono stati rinvenuti ancora vivi, anche se intrappolati nella rete, e sono stati liberati. Tutti gli esemplari coinvolti nell'episodio erano adulti della lunghezza di circa due metri.

Accidental catches of cetaceans by tuna boats are quite frequent in the Mediterranean, even though they are not reported very often (Duguy et al., 1983).

In the seas of southern Italy, it is sometimes possible to find cetaceans entangled in surface drifting nets. On the contrary we had the opportunity of being present during an accidental catch in a circular net, the net used aboard tuna boats. This particular kind of fishing is quite frequent in the Mediterranean. When a shoal of tuna is sighted, the cir-

(*) Museo Civico di Storia Naturale, Corso Venezia 55, 20121 Milano.
Centro Studi Cetacei della Società Italiana di Scienze Naturali, lavoro n. 5.

cular net is lowered around them and, by using a system of rings and ropes, the bottom of the net is gradually closed. When it is completely shut, the net is slowly loaded on board and the tuna are drawn by use of a landing net (fig. 1).

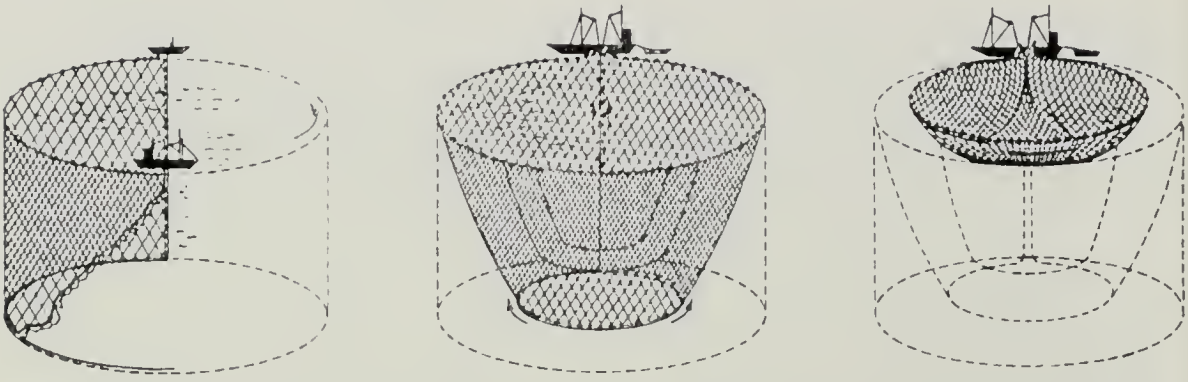

Fig. 1. — The drawing shows how the tuna net works. (From: Encyclopedia « Il Mare », De Agostini, Novara).

On September 6th 1986, we were on board a 24 meter tuna boat in order to carry on our studies on cetaceans, we witnessed an accidental catch of eight striped dolphins; we were in the Ligurian Sea, 45 miles off San Remo (IM) (43° 36′ 51″′ N, 08° 47′ 70″′ E).

The net, 200 meters deep, with a diameter of 450 meters, had been lowered around a shoal of tuna that were feeding just below the surface; the dolphins had not been seen and were accidentally trapped. They were sighted only after the fishermen had started closing the bottom of the net. For about 30 minutes the animals remained near the margin of the net, opposite the boat. They were probably feeding and showed no sign of fear or made any attempt to escape.

All the specimens of the group frequently emerged showing typical swimming schemes:

— they sometimes emerged in a circle, with their heads towards the centre, and when diving, they intersected, arching their caudal peduncle;

— they emerged in two facing rows, intersecting during the immersion;

— all the specimens emerged side by side, swimming in the same direction.

After the first 30 minutes, the group dispersed inside the ring formed by the net; all the specimens emerged alone or in pairs; they often and

quickly turned about and remained below the surface for as much as 5-6 minutes consecutively.

After 20 minutes we found two dead specimens; they were entangled in the net, 50 meters apart from each other, 3 meters below the float line. They were adults, about 2 meters long, the sex of which was impossible to ascertain.

In the meantime, a group of four specimens reformed and swam slowly on the surface of the water at the margin of the net.

Fig. 2. — The dead fifth striped dolphin floating with its venter upwards. (Photo: L. Magnaghi).

At about 200-300 meters from the dead dolphins, two adult females were found; like the former they were entangled in the net. We succeeded in loading them on board, after which we immediately threw them back into the sea, where they instantly disappeared.

At that moment we could see only two specimens out of the group of four; in fact a fifth animal had become entangled in the net with its rostrum. After being loaded on board and put back into the water, it floated with its venter upwards (fig. 2). It was a male approximately 2 meters long and had its dorsal fin bent slightly against the right.

A sixth specimen, a female, was found at a short distance; it has its rostrum, flippers and tail entangled in the net, at float level. It was still

Fig. 3. — The last two specimens swimming near the margin of the net, opposite the boat. (Photo: L. Magnaghi).

alive but its breath was more frequent than usual. After being put back into the water, it slowly began swimming and then left the proximity of the boat.

The last two specimens remained together, near the surface, as far from the boat as possible (fig. 3).

When the net was of a diameter of not more than 3 meters, the two animals kept swimming on the surface of the water and whistled alternatively for 5-6 seconds. Their breath was very frequent and when the floats could be finally lowered under sea-level, they were driven towards that direction and quickly went out of sight. They were adults, one of which was a female.

In the net the fishermen found approximately a hundred tuna, *Thunnus thynnus*, and a small shark, *Prionace glauca*.

Owing to circumstances beyond our control we could neither examine the dead animals nor carry out a rough autopsy.

In all, 8 specimens were involved in the catch: 5 did not survive and 3 were released still alive.

From this experience on board the fishing vessel, we obtained the impression that cetaceans can be saved, when helped promptly. An immediate lowering of the floats opposite the boat would allow them to find an easy exit out of the net. They would consequently avoid panic and the risk of entanglement.

Unfortunately, the lowering of the floats, would cause the loss of a number of tuna and this would understandly create serious inconvenience to fishermen. Furthermore, to carry out this operation, one or two boats, with a crew of at least two persons each, would be necessary in order to drive animals out and this, for obvious reasons, is practically unattainable.

Acknowledgments. - We wish to express our gratitude to Dr. Paola Gastaldi for her friendly help during the draft of this paper.

REFERENCES

We have reported only the two most significant publications concerning the interactions between marine mammals and fisheries. For further details please consult the bibliography of these papers.

Duguy R., Besson J., Casinos A., Di Natale A., Filella S., Raduan A., Raga J. & Viale D., 1983 - L'impact des activites humaines sur les cetaces de la Mediterranee occidentale - *Rapp. Comm. int. Mer. Médit.*, 28 (5): 219-222.

Northridge S. P., 1984 - World review of interactions between marine mammals and fisheries - *FAO Fish. Pap.*, 251: 190 pp.